The Comptroller General
of the United States

Washington, D.C. 20548

Decision

Matter of: Systems and Simulation, Inc.

File: B-232164

Date: November 22, 1988

DIGEST

Protest that agency improperly excluded proposal from the competitive range is denied where the agency reasonably determined that the proposal did not meet certain requirements of the solicitation and would require major revisions to become acceptable.

DECISION

Systems and Simulation, Inc. (SSI), protests the exclusion of its proposal from the competitive range under request for proposals (RFP) No. F08635-88-R-0138, issued by the Department of the Air Force, Armaments Division, Elgin Air Force Base, for the design and production of a computer image generator system (CIGS). SSI contends that the alleged deficiencies in its proposal are either non-existent or could have been easily corrected during discussions.

We deny the protest.

The RFP was issued on March 25, 1988, with proposals due on April 25. Offerors were required to submit separate technical, management and cost proposals with each to be independently evaluated. The technical evaluation factors listed in the RFP in descending order of importance were: Soundness of Approach, Understanding the Problem and Compliance with Requirements. Section L of the solicitation gave offerors specific instructions to follow in preparing their proposals respecting organization and content. The solicitation also contained a detailed statement of work concerning the offerors' responsibilities and the specific design requirements for the CIGS. The RFP provided that the contract would be awarded to the offeror that the government determined could accomplish the requirements in a manner most advantageous to the government, cost or price and other

factors consistent with the source selection criteria considered.

The Air Force received proposals from three offerors and referred the technical proposals to the technical evaluation team for review. After a preliminary review, the evaluation team concluded that two proposals, including the proposal submitted by SSI, were technically unacceptable. However, as part of the technical evaluation, and to ensure that there were no misunderstandings on their part, the evaluation team asked each offeror to respond to clarification requests. Following the receipt of responses, the evaluation team confirmed its initial findings and excluded SSI from the competitive range.

By letter dated July 21, the Air Force notified SSI that its proposal was considered technically unacceptable and outside the competitive range because the proposal presented a high risk approach and a lack of understanding of the problem. SSI contends that the noted deficiencies were either nonexistent and based on the Air Force's misunderstanding of SSI's proposed approach, or could have been easily corrected during discussions.

In view of the importance of achieving full and open competition in government procurement, we closely scrutinize any evaluation that results in only one offeror in the competitive range. CSP Associates, Inc., B-228229, Jan. 29, 1988, 67 Comp. Gen. ____, 88-1 CPD ¶ 87. However, we recognize that the evaluation of proposals and determination of whether an offeror is in the competitive range are matters within the discretion of the contracting agency since it is responsible for defining its needs and must bear the burden of any difficulties resulting from a defective evaluation. Thus, in reviewing protests concerning competitive range determinations our function is not to reevaluate the proposal and make our own determination of its merits; rather, we review the agency's evaluation to ensure that it had a reasonable basis. The fact that the protester does not agree with the agency evaluation does not render the evaluation unreasonable or contrary to law. American Optical Corp., B-228535, Feb. 9, 1988, 88-1 CPD ¶ 127.

Here, the CIGS called for by the RFP will be used to test infrared image seeker assemblies. The RFP is seeking a contractor to design and produce a high fidelity CIGS that will provide realistic infrared imagery while being operated in a larger system that simulates missiles and other scenes in real time. The initial tactical application is to test Infrared High Value Target

Acquisition seekers, requiring simulated ground and target imagery seen from a platform resembling a cruise missile.

Among other components, the CIGS is to be comprised of a data base generator subsystem (DBGS) and a real time image generator subsystem (RTIGS). The DBGS is required to produce a digital data base to provide input to the RTIGS which defines realistic topographic, radiometric and geometric characteristics of the targets and background. The DBGS is required to produce tactical and strategic data bases of at least 10 nautical miles by 10 nautical miles with 6-inch resolution. In addition, the tactical data bases were required to be representative of real world imagery and provide realistic images of missile plumes seen at infrared wave lengths and at very high altitude.

The other major component of the system, the RTIGS, is the main computational element. The RTIGS is required to take information from the DBGS, process it and display it in the infrared in continuous real time with no restrictions on gaming area shape or size.

SSI offered to implement the RTIGS of the CIGS with its Scalable Architecture Image Generator (SAIGE). SAIGE is a polygon-based image generator, as opposed to a photo-based image generator. Polygon-based image generators maintain a description of the world as a collection of faces or polygons. Each polygon can be covered with a pattern to create surface detail. In terms of scene generation, the polygons are sorted and a scene is built up for display in real time. In comparison, photo-based image generators store electronic copies of thousands of photographs and compute images by selecting the best image among those available and electronically distorting the photograph to fit the required need.

In evaluating SSI's technical proposal, the Air Force found deficiencies in each technical area listed in the RFP. The agency was primarily concerned, however, that SSI did not have an adequate understanding of the RFP requirements. Specifically, the Air Force found that SSI's proposal did not demonstrate an adequate understanding of the concept of realistic plume generation; realistic terrain representation in the infrared; photo to infrared conversion; DBGS hardware requirements; and infrared scene generation as implemented in the SAIGE system.

In the Air Force's view, the protester's deficiencies in any one of these areas, standing alone, were sufficient to conclude that its proposal should be excluded from the competitive range. While SSI disagrees with the agency's

evaluation, it has not shown that the agency acted unreasonably in eliminating SSI from the competitive range. Rather, as discussed below, in our view there is sufficient support in the record for the Air Force's conclusion that SSI's proposal was seriously deficient in at least two significant areas, realistic plume generation and photographic to infrared conversion.

The Air Force first found that SSI's proposed approach did not convey an adequate understanding of the requirement for realistic representation of missile plumes. SSI proposed to model the plumes by mapping a faceted surface to an outer shell. The Air Force did not believe that this approach would result in a realistic representation because it did not model the internal structure of the plume nor provide the translucency that would expose the internal structure of the plume. The Air Force also was concerned that SSI's proposed use of CHARM (an Air Force computer program that generates images of rocket plumes at high altitude) in conjunction with its polygon-based generator would not produce a plume image in real time. The Air Force also faulted SSI's proposal for failing to explain the logic that would be required to determine if a plume polygon was not visible because it was overlapped by another plume polygon.

SSI disputes the Air Force's conclusions and argues that its proposal was improperly evaluated. In particular SSI states that translucency is a feature of its design and that internal detail is used implicitly in its modeling process. SSI further contends that its approach is not being evaluated on its own merits; specifically, SSI complains that it should be irrelevant that it intends to model the plume by mapping a faceted surface to the outer shell rather than by modeling internal processes, as long as its approach produces the required result. SSI also asserts that it is using CHARM in the same way one might use a photograph to produce a model, that is, to produce a correct image for its system to generate, not to produce images in real time. Finally, SSI contends that its proposal did describe the process by which an operator would determine if a plume polygon overlapped other plume polygons.

Our review shows that in some instances the Air Force misunderstood or overlooked information in SSI's proposal. Thus, it is clear from the proposal and from SSI's response to the clarification requests that SSI did not intend to use CHARM to model the plumes, but only as a tool to produce an image which it could emulate. It is also clear that SSI addressed the issue of overlapping plume polygons in a section of its proposal titled, "Hidden Surface Algorithm." On the other hand, however, we do not find unreasonable the

Air Force's conclusion that SSI's approach to modeling the plumes will not provide a sufficiently realistic image. In this regard, in its comments on the Air Force report, SSI argues that its proposal did provide for translucency, and internal detail is used implicitly in its modeling process. In its initial protest submission, however, SSI states that, it planned "to model the plume using textured polygons, producing a realistic image when viewed from a distance, but without interior detail (like a building on a movie set)." (Emphasis added.) Based on this inconsistency, and SSI's failure to point to any parts of its proposal supporting its assertion regarding internal detail of the plume, we see no basis to question the agency's position that SSI's approach did not provide for modeling the internal detail as required. We also find no basis to challenge the Air Force's position that without internal detail the plume image will not be sufficiently realistic; SSI's mere disagreement concerning this conclusion does not provide a basis for us to conclude it is unreasonable. GTE Government Corp., B-222587, Sept. 9, 1986, 86-2 CPD ¶ 276.

The Air Force also determined that SSI did not demonstrate an adequate understanding of the process of converting photographs to infrared images. The Air Force reached this conclusion because (1) SSI did not describe the algorithm it intended to use to represent infrared radiometric characteristics based on photographic and cultural data; (2) SSI described a conversion process which involved substantial operator involvement but did not explain what assistance the operator might require in terms of procedures, skills or training; (3) the proposal did not adequately describe a plan to validate the process of assigning infrared characteristics from a data base to the photographed area of interest; and (4) the 4-inch by 4-inch digitizer SSI proposed to use to digitize 9-inch by 9-inch photographs would not result in as good resolution as if a larger digitizer was used.

SSI replies that while its proposed digitizer is not as large as some, it is large enough to perform the required task. SSI asserts that other noted deficiencies should have been the subject of clarification requests and could easily have been corrected.

We agree with SSI that the Air Force could not have rejected SSI's proposal solely for offering a 4-inch by 4-inch digitizer when a larger digitizer was not specifically requested by the RFP, although it could take into account that better digitizers were available. More important, however, we do not agree that the Air Force was required to ask SSI for clarification concerning its validation plan,

the need for operator assistance or the algorithm it intended to use in converting photographs to infrared images, before SSI was eliminated from the competitive range. In this regard, the agency's technical evaluation is dependent upon the information furnished in the proposal and the burden is on the offeror to submit an adequately written initial proposal. Educational Computer Corp., B-227285.3, Sept. 18, 1987, 87-2 CPD ¶ 274. By omitting from its initial proposal significant information regarding the process of converting photographs to infrared images, SSI assumed the risk that its proposal would be found technically unacceptable as a result.

A contracting agency may eliminate an offeror from the competitive range where its proposal is reasonably considered so deficient that it would require major revisions to become acceptable. Kinton, Inc., B-228233 et al., Jan. 28, 1988, 88-1 CPD ¶ 86. In view of our conclusion that the Air Force reasonably determined, that SSI's proposal was seriously deficient in at least two significant areas--SSI's failure to adequately demonstrate that it understood the process of converting photographs to infrared images and SSI's failure to provide a system that modeled the internal structure of plumes--we see no basis to disturb the Air Force's decision to exclude SSI from the competitive range.

The protest is denied.

for James F. Hinchman
General Counsel